What is claimed is:

1. A device for controlling light transmission, comprising:

a mixture comprising a fluid material and a photochromic dyestuff material; and

a medium for carrying said mixture, wherein said mixture varies between a first condition and a second condition, said first condition letting substantially all light pass through said mixture, and said second condition absorbing light passing through said mixture.

2. The device according to claim 1, wherein said fluid material is a liquid crystal material.

3. The device according to claim 2, wherein said conditions are passively reversible.

4. The device according to claim 2, wherein increasing exposure to ultraviolet light forces said mixture toward said second condition.

5. The device according to claim 2, wherein decreasing exposure to ultraviolet light forces said mixture toward said first condition.

6. The device according to claim 2, wherein said conditions are actively reversible.

7. The device according to claim 2, wherein said medium comprises:

a pair of opposed substrates having a gap therebetween for receiving said mixture; and

a frame for holding said pair of substrates adjacent one another.

8. The device according to claim 7, wherein each said substrate has an alignment layer contacting said mixture.

9. The device according to claim 7, wherein at least one of said substrates is a meniscus lens.

10. The device according to claim 1, wherein said medium comprises a polymer film, wherein said mixture is dispersed through said film, and wherein said mixture includes a liquid crystal material.

11. The device according to claim 1, wherein said medium comprises:

a pair of opposed substrates having a gap therebetween for receiving said mixture;

an alignment layer disposed on at least one said substrate facing said gap; and

a sealant capturing said mixture between said substrates.

12. The device according to claim 11, wherein said fluid is a liquid crystal material.

13. The device according to claim 11, wherein said fluid is a chiral nematic liquid crystal material.

14. The device according to claim 11, further comprising:

an electrode disposed on each said substrate facing said gap; and

an electric power source connected to each said electrode, said electric power source generating an electric field that controls the variation between said first and second conditions.

15. The device according to claim 14, wherein application of the electric field controls an angle of said fluid material with respect to said substrate which, in turn, controls the orientation of said photochromic dyestuff material.

16. The device according to claim 14, wherein exposure to ultraviolet light forces said mixture toward said second condition.

17. The device according to claim 16, wherein application of said electric field forces said mixture back toward said first condition.

18. The device according to claim 16, wherein said second condition absorbs visible light and polarization components substantially perpendicular to said alignment layer, and wherein application of said electric field increase absorption of visible light while absorption of the polarization components decrease.

19. The device according to claim 16, wherein said second condition absorbs visible light, but not any polarization components when said electric field is applied.

20. A device for exhibiting variable transparency, comprising:

a pair of opposed substrates positioned adjacent one another and having a gap therebetween; and

a light sensitive material disposed in said gap, said material selectively absorbing light when exposed to ultraviolet light, and said material allowing substantial transmission of light when exposure to ultraviolet light is removed.

21. The device according to claim 20, wherein said material is a polymer liquid crystal material.

22. The device according to claim 20, wherein said material is a mixture of a fluid material and a photochromic dyestuff material.

23. The device according to claim 21, wherein said fluid is a nematic liquid crystal material.

24. The device according to claim 21, wherein said fluid is a chiral nematic liquid crystal material.

25. The device according to claim 23, wherein each said substrate has an alignment layer adjacent said gap, wherein both said alignment layers are uniaxially aligned.

26. The device according to claim 23, further comprising a frame for carrying said substrates.

27. The device according to claim 23, wherein at least one of said substrates is a corrective lens.

28. The device according to claim 23, wherein the amount of light absorption and light polarization is dependent upon the amount of ultraviolet light exposure.

29. The device according to claim 20, wherein said photochromic dyestuff material is at a concentration in the range of 0.1% to10% weight of said fluid material.

30. A device for controlling light transmission, comprising:

a film carrying a mixture of at least a nematic liquid crystal material and a photochromic dyestuff material, said mixture selectively polarizing and absorbing light when exposed to ultraviolet light and said material allowing substantial transmission of light when exposure to ultraviolet light is removed.

31. The device according to claim 30, wherein said film is formed by a phase separation process selected from the group consisting of thermally induced, solvent induced, and polymerization induced.

32. The device according to claim 30, further comprising a substrate for carrying said film.

33. The device according to claim 32, wherein said substrate is a corrective lens.

34. The device according to claim 30, wherein said film is formed from a nematic polymeric material with the dyestuff material orientationally ordered.